

YARDLONG BEAN

Vigna unguiculata (L.) Walp.
 ssp. *sesquipedalis* (L.) Verdc.
 Plant Symbol = VIUNS2

Contributed by: USDA NRCS Pacific Islands West Area Office and National Plant Data Center



University of California at Davis
Small Farm Research Center

Alternate Names

Vigna sesquipedalis (L.) Fruw., Chinese longbean, yard-long bean, judia esparrago, haricot asperge, pea-bean, asparagus bean, Taa-hla-chao (Hmong); juro-kusasagemae (Japanese); dow gauk (Chinese); sitaw (Filipino);

Uses

Ethnobotanic: Edible pods should be picked at maximum length while the skin is still smooth, and before the seeds mature and expand. At this tender stage, they can be snapped and cooked in stew with tomato sauce; boiled and drained, then seasoned with lemon juice and oil; or simmered in butter or oil and garlic. The pale green bean is meatier and sweeter than the dark green bean, which has a less delicate taste.

The mature bean is often dried, stored, and later cooked as a pulse or used as bean sprouts by soaking in water and allowing them to sprout.

The young leaves and stem tips are steamed and eaten as a green vegetable.

Commercial: Long bean can be harvested and sold fresh at local farmers' markets or harvested and sold to local distributors for processing and packaging for later resale.

Ornamental: The large violet-blue flowers and draping pods make yardlong bean a useful ornamental in city parks, office buildings, and around homes.

Wildlife: The young leaves and bean pods are good food for deer, small mammals, and birds.

Status

Please consult the PLANTS Web site and your State Department of Natural Resources for this plant's current status (e.g. threatened or endangered species, state noxious status, and wetland indicator values).

Description

General: Family (Fabaceae). Yardlong bean pods may grow to 10-20 inches long, but customers prefer them 10-12 inches in length and pencil-size. Although both red seeded and black seeded yardlong bean exist, the black seeded pod is preferred for human consumption.

These unique beans grow on twining, delicate stems with a tenacious root system. The plants bloom in mid-summer with a pair of large white or purple flowers. Once pollinated, the flowers are followed by tiny dark green beans that reach 12 inches long in only a few days. The beans can grow up to three feet long, ripening to pale green and inflating as the red or black seeds ripen.

Although yardlong bean resembles pole snap beans (*Phaseolus vulgaris*), it is botanically more closely related to southern cowpeas (*Vigna unguiculata*). However, yardlong bean is much more a trailing and climbing plant than the southern pea, often reaching 9-12 feet in height.

Yardlong bean, a true legume, enriches the soil by fixing atmospheric nitrogen in nodules on its roots. With the help of nitrogen fixing bacteria, the plant makes its own food.

Distribution: The yardlong bean originated in southern Asia and is now grown extensively in Asia, Europe, Oceania, and North America. For current naturalized U.S. distribution, please consult the Plant

Profile page for this species on the PLANTS Web site.

Establishment

Adaptation: Yardlong bean tolerates acid soils but prefers soil pH range of 5.5 – 7.5. The plant thrives in soils that are loose, friable, and not too rich in nitrogen. Soils heavy in nitrogen can cause over abundant leaf growth and reduced bean production. Choose a site in full sun and loosen the soil to a depth of eight to ten inches in preparation for sowing. Mix in compost or composted manure in spring to slightly boost soil fertility

The plant's long, trailing growth habit requires a trellis for best production. Training the vine requires labor, about as much as for tomatoes and peas. The plant will climb by itself, but still needs some help and a very strong trellis system. The vines will grow to the top of your trellis, so don't build the trellis so high that harvesting is made difficult. Bamboo tripods or row trellising with poles and string, at least seven feet high are required to accommodate the vines. Various trellising systems can be used. Yardlong bean will climb poles, especially if they are not completely vertical and the poles are 3/4 inch to 2 and a half inches in diameter, but must be trained to poles early during the growing season.

Yardlong bean thrives in heat and withers in cold, so sow after all danger of frost has passed and the soil has warmed. To move the planting schedule ahead, one can put down black plastic mulch to warm soil. If using a tripod system, plant three or four seeds to each pole. If using a row trellis, plant the seeds 3 to 4 inches apart in the row..Plant the seeds two inches deep in loose friable soil or an inch deep in heavy soil. In areas with very long growing season, make two more successive sowings, at two-week intervals. In northern climates, a single sowing in late spring will often produce until frost.

Seeds will germinate in about a week and the young plants will start producing abundantly once the weather heats up. They easily tolerate hot weather and even some drought. However, to keep the beans producing, water in dry spells. It is unnecessary to fertilize yardlong bean unless you have nutrient-poor soil.

This warm-season crop can be planted in a wide range of climatic conditions, but is very sensitive to cold temperatures. It can tolerate heat, low rainfall and arid soils, but the pods become short and fibrous with low soil moisture. Yardlong bean prefer high

temperature, conditions under which other green beans cannot be produced.

Propagation by seed: Plant seeds in a raised bed 1 to 2 inches deep in late spring when the soil is warm. To ensure good germination water beds immediately after planting. Thin the young plants to 6-12 inches in the row with 3-4 feet between rows. Since yardlong bean is a legume, inoculate the seed with nitrogen fixing *Rhizobium* bacteria as an alternative to using nitrogen fertilizer. If the seed is not inoculated with a *Rhizobium*, high nitrogen fertilizer may be required when seeding and during the growing season.

Management

General:

Yardlong bean is harvestable about two months after direct seeding or sowing and continues throughout summer and into the fall. Harvest pods when the beans are about half the diameter of a pencil, before the seeds have filled out inside and when they still snap when bent. You may need to harvest daily since continuous picking keeps the plants producing. The plants will stop producing if beans are left to ripen. Although the beans will keep several days in the refrigerator, they are best eaten soon after harvesting. They can also be blanched and frozen for winter storage.

Yardlong bean have a more dense texture than those of snap beans and more intense "bean" flavor. Their texture and flavor hold up well when stir-fried or steamed. If the beans are left to mature somewhat, they can be shelled and cooked as other southern "peas".

Harvested beans develop rusty patches quickly. Keep moist while in coolers, since dehydration in the coolers will lower quality and make them unmarketable.

Pests and Potential Problems

Aphids, particularly the black bean aphid (*Aphis fabae*), are drawn to the pods of this plant. Thrips tend to be a pest early in the season, but the plants will often out grow them, especially as the weather gets warmer and the plants grow faster. Mites can be a problem, primarily after insecticide applications, which often lead to mite outbreaks.

Cultivars, Improved, and Selected Materials (and area of origin)

Contact your local agricultural extension vegetable specialist for recommendations pertinent to your growing site.

References

Abdullah, W.D., A.A. Powell, and S. Matthews 1991. *Association of differences in seed vigor in long bean (Vigna seequipedalis) with testa colour and imbibition damage*. Journal of Agri. Sci. 116. 259-264.

Duke, J.A. 1981. *Handbook of Legumes of World Economic Importance*. Plenum Press, New York, New York.

Federal-State Market News Service. 1987 & 1988. *San Francisco Fresh Fruit and Vegetable Wholesale Market Prices*. USDA and CDFA.

Fery, F.L. 2002. *New opportunities in Vigna*. p. 424-428. In: J. Janick and A. Whipkey (eds.), Trends in new crops and new uses. ASHS Press, Alexandria, Virginia.

Harrington, G. 1984. *Grow your own Chinese vegetables*. Garden Way Publishing, Pownal, Vermont. 268 pp.

Knott, J.E. & J.A. Deanon. 1967. *Vegetable production in Southeast Asia*. University of Philippines, College of Agriculture, Los Banos. 366 pp.

Lim, T. K. 199?. *Loofahs, gourds, melons and snake beans*. The New Rural Industries. Ed.: K. W. Hyde. Canberra, Rural Industries Research and Development Corporation. 212-218.

Stephens, James M. 1994. *Bean, yard-long Vigna unguiculata subsp. sesquipedalis (L.) Verde*. Fact Sheet HS-562. Hort. Sci. Dept., Inst. Of Food and Agri. Sci. University of Florida. Gainesville, Florida.

Wall, G.C., C.A. Kimmons, A.T. Wiecko & J. Richardson. *Blackeye cowpea mosaic virus (BICVM) in yard-long bean in the Mariana Islands*. Micronesica 29(2): 101-111.
<<http://www.uog.edu/up/micronesica/> >

Yamaguchi, M. 1983. *World vegetables*. AVI Publishing Company, Inc., Westport, Connecticut. 415 pp.

You, Z., M. Marutani, & D. Borthakur. 2002. *Diversity among Bradyrhizobium isolates nodulating yardlong bean and sunnhemp in Guam*. J. Applied Microbiology 93:577-584.

<http://www.ctahr.hawaii.edu/mbbe/faculty/files/You_et_al_2002.pdf>

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